CLMPTO

1. (Amended) A device for controlling a generator including a diode bridge, comprising:

a transistor for at least temporarily short-circuiting the diode bridge, the transistor including an interrupter connected parallel to the diode bridge; and

a capacitor smoothing a current detected at a voltage detection point, wherein the transistor has a base which receives a control signal.

2. (Amended) The device according to claim 1, wherein the transistor includes [one of] a MOS field-effect transistor[, an insulated gate bipolar transistor and a further semiconductor switching device].

3. The device according to claim 1, wherein the control signal is a modulatable signal, the modulatable signal having a frequency which is adjustable for setting a voltage at an output of the diode bridge that is substantially higher than a predetermined generator output voltage.

4. The device according to claim 3, wherein the modulatable signal includes one of a pulse-width modulated signal and a further signal having a variable mark-to-space ratio.

5. The device according to claim 4, wherein the mark-to-space ratio of the modulatable signal is determined by generating phase voltages from the generator corresponding to higher predetermined voltages at the output of the diode bridge.

6. (Amended) The device according to claim 1, further comprising:

a diode element coupled between the diode bridge and [a] the voltage detection point, the diode element allowing a flow of [a] the current only from the generator to the voltage detection point.

Claim 7 (Cancelled)

8. The device according to claim 1, wherein the diode bridge includes a resonant controller providing a step-up converter function using predetermined switching principles.

9. The device according to claim 1, wherein the generator is a three-phase generator including three stator inductors.

10. The device according to claim 9, wherein the generator rectifies a current induced in the stator inductors by synchronously generated voltages.

11. (Twice Amended) A device for controlling a generator including a controlled transistor bridge having a first transistor, comprising:

a second transistor for at least temporarily short-circuiting the controlled transistor bridge, the second transistor including an interrupter connected to the controlled transistor bridge,

wherein the second transistor has a base which receives a control signal, and

wherein the controlled transistor bridge provides a step-up converter function.

12. The device according to claim 11, wherein the controlled transistor bridge and the first transistor are controlled to obtain a synchronous rectification.

13. (Amended) A method for controlling a generator having a diode bridge, comprising the steps of:

at least temporarily short-circuiting the diode bridge using a transistor, the transistor including an interrupter coupled parallel to the diode bridge; [and]

providing a control signal to a base of the transistor for controlling the generator; and

smoothing a current detected at a voltage detection point using a capacitor.

14. (Amended) The method according to claim 13, wherein the transistor includes [one of] a MOS field-effect transistor[, an insulated gate bipolar transistor and a further semiconductor switching device].

15. The method according to claim 13, wherein the control signal is a modulatable signal, the modulatable signal having a frequency which is adjustable for setting a voltage at an output of the diode bridge that is substantially higher than a predetermined generator output voltage.

16. The method according to claim 15, wherein the modulatable signal includes one of a pulse-width modulated signal and a further signal having a variable mark-to-space ratio.

17. The method according to claim 16, further comprising the step of:

determining the variable mark-to-space ratio to generate phase voltages from the generator corresponding to higher predetermined voltages at the output of the diode bridge.

18. (Amended) The method according to claim 13, further comprising the step of:

coupling a diode element between the diode bridge and [a] the voltage detection point, the diode element providing a flow of [a] the current only from the generator to the voltage detection point.

Claim 19 (Cancelled)

20. The method according to claim 13, further comprising the step of:

implementing a step-up converter function using predetermined switching principles and a resonance converter.

21. The method according to claim 13, wherein the generator is a three-phase generator including three stator inductors.

22. The method according to claim 21, wherein the generator rectifies a current induced in the stator inductors by synchronously generated voltages.

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23. (Twice Amended) A method for controlling a generator having a controlled transistor bridge including a first transistor, the method comprising the steps of:

at least temporarily short-circuiting the controlled transistor bridge using a second transistor, the second transistor including an interrupter coupled to the controlled transistor bridge;

providing a control signal to a base of the second transistor for controlling the generator; and

providing a step-up converter function using the controlled transistor bridge.

24. The method according to claim 23, further comprising the step of:

controlling the transistor bridge and the first transistor to obtain a synchronous rectification.

Claims 25 – 26 (Cancelled)

27. (Twice Amended) A device for controlling a generator, comprising:

a controlled transistor bridge including:

a plurality of first transistors, each one of the plurality of first transistors being coupled to at least another one of the plurality of first transistors, and

one of a second transistor coupled to at least one of the plurality of first transistors and a freewheeling diode coupled to at least one of the plurality of first transistors, wherein the controlled transistor bridge provides a step-up converter function.

28. (New) The device according to claim 27, further comprising:

a capacitor smoothing a current detected at a voltage detection point.

29. (Amended) A device for controlling a generator, comprising:

a rectification arrangement including:

a rectifier including a plurality of diodes, and

a [set]step-up converter including a plurality of transistors, each one of the plurality of transistors being coupled to a corresponding one of the plurality of diodes, wherein the plurality of transistors is controlled to enable the rectification arrangement to perform a step-up converter function.

30. (New) The device according to claim 29, further comprising:

a capacitor smoothing a current detected at a voltage detection point.

31. (New) The device according to claim 1, wherein the transistor includes an insulated gate bipolar transistor.

32. (New) The device according to claim 1, wherein the transistor includes a further semiconductor switching device.

33. (Amended) The method according to claim 13, wherein the transistor includes an insulated gate bipolar transistor.

34. (Amended) The method according to claim 13, wherein the transistor includes a further semiconductor switching device.

35. (Amended) A device for controlling a generator including a controlled transistor bridge having a freewheeling diode, comprising:

a transistor for at least temporarily short-circuiting the controlled transistor bridge, the transistor including an interrupter connected to the controlled transistor bridge,

wherein the transistor has a base which receives a control signal, and

wherein the controlled transistor bridge provides a step-up converter function.

36. (Amended) A method for controlling a generator having a controlled transistor bridge including a freewheeling diode, the method comprising the steps of:

at least temporarily short-circuiting the controlled transistor bridge using a transistor, the transistor including an interrupter coupled to the controlled transistor bridge;

providing a control signal to a base of the transistor for controlling the generator; and

providing a step-up converter function using the controlled transistor bridge.

37. (Amended) The device according to claim 29, wherein each one of the plurality of transistors is coupled in series to the corresponding one of the plurality of diodes.